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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HONEYCUTT, KRISTINA B	

ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/670,632	COMMARFORD ET AL.	
	Examiner	Art Unit	
	Kristina B. Honeycutt	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to amendment filed June 23, 2006.

This action is made **Final**.

2. Claims 1-28 remain pending in the case. Claims 1, 5, 14, 18, 27 and 28 are independent claims.

Claim Rejections - 35 USC § 112

3. The rejections of Claims 9 and 22 for lacking antecedent basis for the limitation "the initial help message" have been withdrawn as necessitated by the amendment.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 27 and 28 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The language of claims 27 and 28 raises a question as to whether the claimed systems are directed merely to an abstract idea that is not tied to a technological art, environment, or machine which would result in a practical application producing a

concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. §101.

See MPEP §2106 below.

2106 [R-2] Patentable Subject Matter – Computer-Related Inventions

1. Nonstatutory Subject Matter
If the "acts" of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. Schrader, 22 F.3d at 294-95, 30 USPQ2d at 1458-59. Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process.
In practical terms, claims define nonstatutory processes if they:
- consist solely of mathematical operations without some claimed practical application (i.e., executing a "mathematical algorithm"); or
- simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application.
Cf. Alappat, 33 F.3d at 1543 n.19, 31 USPQ2d at 1556 n.19 in which the Federal Circuit recognized the confusion:
The Supreme Court has not been clear . . . as to whether such subject matter is excluded from the scope of 101 because it represents laws of nature, natural phenomena, or abstract ideas. See Diehr, 450 U.S. at 186 (viewed mathematical algorithm as a law of nature); Gottschalk v. Benson, 409 U.S. 63, 71-72 (1972) (treated mathematical algorithm as an "idea"). The Supreme Court also has not been clear as to exactly what kind of mathematical subject matter may not be patented. The Supreme Court has used, among others, the terms "mathematical algorithm," "mathematical formula," and "mathematical equation" to describe types of mathematical subject matter not entitled to patent protection standing alone. The Supreme Court has not set forth, however, any consistent or clear explanation of what it intended by such terms or how these terms are related, if at all.
Certain mathematical algorithms have been held to be nonstatutory because they represent a mathematical definition of a law of nature or a natural phenomenon. For example, a mathematical algorithm representing the formula E = mc2 is a "law of nature" - it defines a "fundamental scientific truth" (i.e., the relationship between energy and mass). To comprehend how the law of nature relates to any object, one invariably has to perform certain steps (e.g., multiplying a number representing the mass of an object by the square of a number representing the speed of light). In such a case, a claimed process which consists solely of the steps that one must follow to solve the mathematical representation of E = mc2 is indistinguishable from the law of nature and would "preempt" the law of nature. A patent cannot be granted on such a process.
(a) Functional Descriptive Material: "Data Structures" Representing Descriptive Material Per Se or Computer Programs Representing Computer Listings Per Se
Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other

> claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.
> Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-28 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Chinn et al. (U.S. Pub. No. 20020010715; publication date January 24, 2002; filed July

26, 2001) in view of Schuba et al. (U.S. Patent 6725378; date of patent April 20, 2004; filed April 15, 1999; provisional application filed April 15, 1998).

Regarding independent claim 1, Chinn teaches determining an interactive voice response event corresponding to a request for help (p.4, para. 54; p.12, para. 143, 148) since Chinn teaches the user requesting help and the system providing an audible help message and the system is capable of interacting with the user if more information is needed.

Chinn further teaches classifying said event as at least one of a default help request and a user initiated help request (p.12, para. 143, 148; p.15, para. 175) since Chinn teaches a help message when a user requests help and a help message as a default when the system does not recognize the request and needs more information.

Chinn further teaches setting a time for receiving user input to a default value if said event is classified as said default help request (p.12, para. 144; p.16, para. 183-185) since Chinn teaches setting a timeout value for a user response when a help message is requested.

Chinn further teaches interactive voice response application takes programmatic action upon expiration of said time for receiving user input (p.12, para. 139, 144; p.16, para. 184, 185) since Chinn teaches replaying a message or ending a session when a timeout occurs or when the timeout threshold is reached.

Chinn teaches setting a time for receiving user input to a value if said event is classified as said user initiated help request (p.12, para. 144; p.16, para. 183-185) since

Chinn teaches setting a timeout value for a user response when a help message is requested. Chinn does not disclose setting the time to a value less than the default value. Schuba teaches setting a time to a value less than the default (col. 10, lines 25-28). It would have been obvious to one of ordinary skill in the art, having the teachings of Chinn and Schuba before him at the time the invention was made, to modify setting a time as taught by Chinn to include setting a time to less than the default as taught by Schuba, because Chinn teaches setting a timeout period for user response (p.12, para. 144; p.16, para. 183-185) and Schuba teaches setting a timeout period to a value less than the default (col. 10, lines 25-28) so the timeout period taught by Chinn could be set to a value less than the default.

Regarding dependent claim 2, Chinn teaches the method of claim 1, said classifying step further comprises the steps of if said interactive voice event corresponds to receiving a user input that said interactive voice response application fails to recognize as a valid input selection, classifying said event as said default help request (p.12, para. 143, 145; p.16, para. 187, 189) since Chinn teaches the system supplying a default help message by prompting the user for more information when the request is not recognized.

Regarding dependent claim 3, Chinn teaches the method of claim 1, said classifying step further comprises the steps of if said interactive voice event corresponds to a failure to receive user input for a specified duration, classifying said event as said

default help request (p.12, para. 144; p.16, para. 183-185) since Chinn teaches the system supplying a default help message by replaying a help message when the user does not respond.

Regarding dependent claim 4, Chinn teaches the method of claim 1, wherein said default value is at least six seconds and wherein said value less than said default value is at most three seconds (p.12, para. 144) since Chinn teaches the value as a number of seconds.

Regarding independent claim 5, Chinn teaches determining an interactive voice response event corresponding to a help message request (p.12, para. 143) since Chinn teaches a help message provided when the system does not recognize the user's request or when the user requests help.

Chinn further teaches setting a time-out threshold to a default time (p.12, para. 144; p.16, para. 183-185) since Chinn teaches setting a timeout value for a user response and setting a timeout threshold for the number of times a timeout can occur before the system takes further action.

Chinn further teaches audibly presenting a first help message (p.2, para. 54; p.3, para. 64 ; p.12, para. 144, 145 ; p.16, para. 183-185).

Chinn further teaches once said first help message has been presented, starting a no-response timer (p.16, para. 183-185) since Chinn teaches a setting a timer for a

timeout value after each message is played and incrementing a timeout value until a threshold is reached.

Chinn further teaches if said no-response timer exceeds said time-out threshold, audibly presenting a second help message (p.16, para. 185) since Chinn teaches playing other messages when a timeout occurs.

Chinn teaches if said event includes an explicit user request for help, setting a time-out threshold (p.12, para. 144; p.16, para. 183-185) since Chinn teaches setting a timeout value for a user response when a help message is requested. Chinn does not disclose decreasing the time-out threshold. Schuba teaches decreasing a timeout value (col. 10, lines 25-28). It would have been obvious to one of ordinary skill in the art, having the teachings of Chinn and Schuba before him at the time the invention was made, to modify setting a timeout threshold as taught by Chinn to include decreasing the value as taught by Schuba, because Chinn teaches setting a timeout period for user response (p.12, para. 144; p.16, para. 183-185) and Schuba teaches setting a timeout period to a value less than the default (col. 10, lines 25-28) so the timeout period taught by Chinn could be set to a value less than the default.

Regarding dependent claim 6, Chinn teaches the method of claim 5, further comprising the steps of once said second help message has been presented, starting a no-response timer (p.16, para. 183-185) since Chinn teaches a setting a timer for a timeout value after each message is played and incrementing a timeout value until a threshold is reached.

Chinn further teaches if said no-response time for said second help message exceeds said time-out threshold, performing a previously established IVR operation (p.16, para. 185) since Chinn teaches returning to a main menu or playing a last resort message if there is no response.

Regarding dependent claim 7, Chinn teaches the method of claim 6, wherein said previously established IVR operation includes resetting said time-out threshold to said default time (p.16, para. 184, 185) since Chinn teaches resetting the timer.

Regarding dependent claim 8, Chinn teaches the method of claim 6, wherein said previously established IVR operation includes audibly presenting a help message (p.16, para. 185) since Chinn teaches presenting a last resort message.

Regarding dependent claim 9, Chinn teaches the method of claim 5, wherein said previously established IVR operation includes at least one of cycling back to an initial help message, establishing a connection wit a human agent, and establishing a connection with an automated system (p.16, para. 185) since Chinn teaches cycling back to a main menu for a user to make further selections.

Regarding dependent claim 10, the claim reflects the method for performing the operations of claim 1 and is rejected along the same rationale.

Regarding dependent claim 11, Chinn teaches the method of claim 5, further comprising the steps of after said presentation of said first help message has begun, receiving an explicit user request for help (p.15, para. 175) since Chinn teaches a user requesting help at any time during the operation.

Chinn further teaches if said non-response threshold equals the default time, decreasing said time-out threshold (p.16, para. 183-185) since Chinn teaches increasing a counter for each timeout which lowers the threshold until it is reached.

Regarding dependent claims 12 and 13, the claims reflect the methods for performing the operations of claim 4 and are rejected along the same rationale.

Regarding claims 14-26, the claims reflect the machine-readable storage having stored thereon computer programs for performing the operations of claims 1-13 respectively and are rejected along the same rationale.

Regarding independent claim 27, the claim reflects the system for performing the operations of claim 1 and is rejected along the same rationale.

Regarding independent claim 28, the claim reflects the system for performing the operations of claim 5 and is rejected along the same rationale.

Response to Arguments

6. Applicant's arguments filed June 23, 2006 have been fully considered but they are not persuasive. Regarding independent claims 1, 5, 14, 18, 27 and 28, Applicants indicate Chinn in view of Schuba does not disclose "decreasing a time-out threshold" (p.10, para. 2). The Examiner disagrees because independent claims 1, 14 and 27 do not claim deceasing a time-out threshold. Claims 1, 14 and 27 state "setting said time for receiving user input to a value less than said default value if said event is classified as said user initiated help request. Chinn teaches setting a time for receiving user input to a value if said event is classified as said user initiated help request (p.12, para. 144; p.16, para. 183-185). In other words, Chinn teaches setting a timeout value for a user response when a help message is requested. Schuba teaches setting a time to a value less than the default (col. 10, lines 25-28).

Independent claims 5, 18 and 28 claim "if said event includes an explicit user request for help, decreasing said time-out threshold." Chinn teaches if said event includes an explicit user request for help, setting a time-out threshold (p.12, para. 144; p.16, para. 183-185). In other words, Chinn teaches setting a timeout value for a user response when a help message is requested. Schuba teaches decreasing a timeout value (col. 10, lines 25-28).

Claims 2-4, 6-13, 15-17, 19-26 depend from independent claims 1, 5, 14 and 18 and are therefore rejected at least based on the rationale of the rejection above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristina B. Honeycutt whose telephone number is 571-272-4123. The examiner can normally be reached on 8:00 am - 5:00 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KBH

CESAR PAULA
PRIMARY EXAMINER